



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,639	06/19/2001	Heikki Halkosaari	309-010104-US (PAR)	2656

2512 7590 05/05/2004

PERMAN & GREEN
425 POST ROAD
FAIRFIELD, CT 06824

EXAMINER

DANIEL JR, WILLIE J

ART UNIT	PAPER NUMBER
2686	10

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/884,639

Applicant(s)

HALKOSAARI ET AL.

Examiner

Willie J. Daniel, Jr.

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-22 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Art Unit: 2686

DETAILED ACTION

Drawings

1. The objections to Figs. 2, 3, and 4A are withdrawn.

Specification

2. The objection to the Disclosure is withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (US 6,078,792) in view of Ford et al. (hereinafter Ford) (US 5,625,688).

Regarding **Claim 1**, Phillips teaches of a mobile communication device (10) comprising:

telephone circuitry (36) having a front side, the front side of the telephone circuitry (36) having a top end and a bottom end (see col. 2, lines 45-50; Figs. 1-2); and

a housing (20) having a front cover (22) which reads on the claimed "top shell" and a back cover (24) which reads on the claimed "bottom shell", the top shell (22) and the bottom shell (24) being disconnectable (see Fig. 2);

the housing (20) further including a microphone interface (28) and a speaker interface (28) (see col. 2, lines 35, 57-63; Figs. 1-2), where the housing is designed to protect the internal components from water.

wherein the housing (20) is adapted to substantially enclose the telephone circuitry (36) when the top shell (22) and the bottom shell (24) are mated in a direction from the top end to the bottom end (see col. 2, lines 45-46; Figs. 1-2). Phillips fails to disclose that the microphone and speaker interface has a gasket. However, the examiner maintains that the microphone and speaker interface has a gasket was well known in the art, as taught by Ford.

In the same field of endeavor, Ford teaches that the mouthpiece (46) which reads on the claimed “microphone interface” and earpiece (44) speaker interface including a water-impervious flexible membrane which reads on the claimed “gasket” that allows sound penetration while preventing the entry of water and contaminants (see abstract; col. 4, lines 6-21; col. 4, line 63 col. 5, line 24; Fig. 1), where the portable cordless telephone (12) has a housing (14) that prevents water from entering the housing (14) while allowing the user to speak and hear via the mouthpiece and earpiece during a shower.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Phillips and Ford to have the microphone and speaker interface has a gasket.

The advantage of combining the teachings of Phillips and Ford to have a water-resistant handset that can be safely used in watery conditions such as shower, rain, or high humidity conditions while allowing signals and sounds to be transmitted/received by a user's voice (see Ford - col. 4, lines 9-14; col. 5, lines 3-8, 19-25; col. 8, lines 11-17).

Regarding **Claim 2**, the combination of Phillips and Ford discloses everything claimed, as applied above (see claim 1), in addition Phillips further teaches of the mobile communication device (10) of claim 1 further comprising a user interface, the user interface usable by a mobile communication device user on the front side of the telephone circuitry (36) (see Figs. 1-2).

Regarding **Claim 3**, the combination of Phillips and Ford discloses everything claimed, as applied above (see claim 2), in addition Phillips further teaches wherein the user

interface comprises a display (32), the display viewable by the mobile communication device (10) user through the housing (20) (see col. 2, lines 30-44; Figs. 1-2).

Regarding **Claim 4**, the combination of Phillips and Ford discloses everything claimed, as applied above (see claim 2), in addition Phillips further teaches wherein the user interface comprises a touch pad (30), the touch pad (30) interfaced to by the mobile communication device user through the housing (20) (see Figs. 1-2).

Regarding **Claim 19**, a method of assembling a mobile communication device (10) comprising the steps of:

providing telephone circuitry (36) having a front side, the front side having a top end and a bottom end (see col. 2, lines 45-50; Figs. 1-2);

providing a housing (20) having a top shell (22) and a bottom shell (24), the top shell (22) and the bottom shell (24) being disconnectable (see Fig. 2), the housing (20) further including a microphone interface (28) and a speaker interface (28) (see col. 2, lines 35, 57-63; Figs. 1-2), where the housing is designed to protect the internal components from water; and

mating the top shell (22) and the bottom shell (24) around the telephone circuitry (36) in a direction from the top end to the bottom end of the telephone circuitry (36) (see col. 2, lines 45-46; Figs. 1-2). Phillips fails to disclose that the microphone and speaker interface has a gasket. However, the examiner maintains that the microphone and speaker interface has a gasket was well known in the art, as taught by Ford.

Ford further teaches that the mouthpiece (46) which reads on the claimed "microphone interface" and earpiece (44) speaker interface including a water-impervious

Art Unit: 2686

flexible membrane which reads on the claimed "gasket" that allows sound penetration while preventing the entry of water and contaminants (see abstract; col. 4, lines 6-21; col. 4, line 63 col. 5, line 24; Fig. 1), where the portable cordless telephone (12) has a housing (14) that prevents water from entering the housing (14) while allowing the user to speak and hear via the mouthpiece and earpiece during a shower.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Phillips and Ford to have the microphone and speaker interface has a gasket.

The advantage of combining the teachings of Phillips and Ford to have a water-resistant handset that can be safely used in watery conditions such as shower, rain, or high humidity conditions while allowing signals and sounds to be transmitted/received by a user's voice (see Ford - col. 4, lines 9-14; col. 5, lines 3-8, 19-25; col. 8, lines 11-17).

Regarding **Claim 20**, the combination of Phillips and Ford discloses everything claimed, as applied above (see claim 19), in addition Phillips further teaches of further comprising the step of connecting the top shell to the bottom shell with a fastener or interlocking flanges (see col. 2, lines 56-57; Figs. 1-2).

Regarding **Claim 21**, the combination of Phillips and Ford discloses everything claimed, as applied above (see claim 1), in addition Phillips further teaches wherein the device is a cordless telephone handset (10) (see col. 2, lines 31-35; Figs. 1-2).

Regarding **Claim 22**, the combination of Phillips and Ford discloses everything claimed, as applied above (see claim 19), in addition Phillips further teaches of the mobile

Art Unit: 2686

communication device (10) comprises a cordless telephone handset (10) (see col. 2, lines 31-35; Figs. 1-2).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (US 6,078,792) and Ford et al. (hereinafter Ford) (US 5,625,688) as applied to claim 1 above, and further in view of Nothnagel et al. (hereinafter Nothnagel) (US 4,397,035).

Regarding **Claim 5**, the combination of Phillips and Ford discloses everything claimed, as applied above (see claim 1), in addition Phillips further teaches of having of mobile communication device (10) having water-absorbent packing (see col. 1, lines 51-64). The difference between Phillips and the claimed is the isolation of the telephone circuitry from water by a seal.

In the same field of endeavor, Nothnagel teaches of the seal (18) being adapted to isolate the telephone circuitry within the housing from water outside the housing (see col. 2, line 64 - col. 3, line 3; Fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Phillips, Ford, and Nothnagel to have a seal between the top shell and the bottom shell, the seal being adapted to isolate the telephone circuitry within the housing from water outside the housing.

The advantage of combining the teachings of Phillips, Ford, and Nothnagel is to prevent water from penetrating the housing of a mobile communication device.

Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (US 6,078,792) and Ford et al. (hereinafter Ford) (US 5,625,688) as applied to claim 1 above, and further in view of Curtis et al. (hereinafter Curtis) (US 6,594,472).

Regarding **Claim 6**, the combination of Phillips and Ford discloses everything claimed, as applied above (see claim 1), in addition Phillips further teaches of having a housing (10). The difference between Phillips and the claimed is the interchangeable housing with another changeable housing by the mobile communication user.

In the same field of endeavor, Curtis teaches of the housing being adaptable to be interchange with a second changeable housing that is changeable by a mobile communication device user (see col. 1, lines 8-17,35-54; Figs. 1, 3-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Phillips, Ford, and Curtis to have wherein the housing is adapted to be interchangeable with a second changeable housing that is changeable by a mobile communication device user.

The advantage of combining the teachings of Phillips, Ford, and Curtis is to allow the user to easily change the housing without requiring any special training or tools as well as to allow replacing of the upper or lower housing if damaged or to change the appearance of the mobile communication device.

Regarding **Claim 7**, the combination of Phillips, Ford, and Curtis discloses everything claimed, as applied above (see claim 6), in addition Curtis further teaches the wherein the second changeable housing has a different predetermined characteristic than the housing (see Curtis - col. 1, lines 12-15, 48-54).

Regarding **Claim 8**, the combination of Phillips, Ford, and Curtis discloses everything claimed, as applied above (see claim 1), in addition Curtis further teaches wherein the housing is adapted to be interchangeable with a second changeable housing that is changeable by a mobile communication device user without the use of a tool (see Curtis -col. 1, lines 8-17, 35-54).

Regarding **Claim 9**, the combination of Phillips, Ford, and Curtis discloses everything claimed, as applied above (see claim 1), in addition Curtis further teaches comprising at least one fastener, wherein the fastener or attaching means is adapted to couple the top shell to the bottom shell (see Curtis - col. 1, line 35 - col. 2, line 17). The fastener or attaching means allows one housing to connect to a second housing.

Regarding **Claim 10**, the combination of Phillips, Ford, and Curtis discloses everything claimed, as applied above (see claim 9), in addition Curtis further teaches wherein the fastener comprises a latch or latching member (see Curtis - col. 1, line 35 - col. 2, line 17).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (US 6,078,792), Ford et al. (hereinafter Ford) (US 5,625,688), and Curtis et al. (hereinafter Curtis) (US 6,594,472) as applied to claim 9 above, and further in view of Carlson et al. (hereinafter Carlson) (US 5,241,592).

Regarding **Claim 11**, the combination of Phillips, Ford, and Curtis lacks the rotatable key as stated by the claimed. In the same field of endeavor, Carlson teaches of having a

Art Unit: 2686

rotatable key (132) for connecting components of a mobile communication device (see col. 2, lines 5-17; col. 6, lines 2-5; Figs. 1, 2, 5c, and 7-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Phillips, Ford, Curtis, and Carlson wherein the fastener comprises a rotatable key.

The advantage of combining the teachings of Phillips, Ford, Curtis, and Carlson is to fasten or attach one component with another component of a mobile communication device.

Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (US 6,078,792) in view of Nothnagel et al. (hereinafter Nothnagel) (4,397,035), Curtis et al. (hereinafter Curtis) (US 6,594,472), and Ford et al. (hereinafter Ford) (US 5,625,688).

Regarding **Claim 12**, Phillips teaches of having a waterproof mobile communication device (10, see Phillips - Fig. 1) comprising:

a housing having a first shell (22) and a second shell (24), the first shell (22) and the second shell (24) being disconnectable by a mobile communication device user (see Phillips - Figs. 1-2).

wherein the housing (20) further includes a microphone interface (28) and a speaker interface (28) (see col. 2, lines 35, 57-63; Figs. 1-2), where the housing is designed to protect the internal components from water. Phillips fails to disclose having a seal, an interchangeable housing, and microphone and speaker interface with a gasket. However, the examiner maintains having a seal was well known in the art, as taught by Nothnagel.

Art Unit: 2686

Nothnagel further teaches of a seal (18) between the first shell (1) and the second shell (2), the seal being adapted to isolate telephone circuitry within the housing from water outside the housing (see col. 2, line 64 - col. 3, line 3; Fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Phillips and Nothnagel to have a seal between a first shell and the bottom shell, the seal being adapted to isolate the telephone circuitry within the housing from water outside the housing.

The advantage of combining the teachings of Phillips and Nothnagel is to prevent water from penetrating the housing of a mobile communication device. The combination of Phillips and Nothnagel fail to disclose having an interchangeable housing and microphone and speaker interface with a gasket. However, the examiner maintains having an interchangeable housing was well known in the art, as taught by Curtis.

Curtis further teaches of having a housing wherein the housing (2) is adapted to be interchangeable with a second chargeable housing (3) that is changeable by the mobile communication device user (see col. 1, lines 8-17,35-54; col. 3, lines 17-22; Figs. 1, 3-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Phillips, Nothnagel, and Curtis wherein the housing is adapted to be interchangeable with a second chargeable housing that is changeable by the mobile communication device user.

The advantage of combining the teachings of Phillips, Nothnagel, and Curtis is to have a waterproof mobile communication device that will allow the user to easily change the housing without requiring any special training or tools as well as to allow replacing of the

Art Unit: 2686

upper or lower housing if damaged or to change the appearance of the mobile communication device. The combination of Phillips, Nothnagel, and Curtis fails to disclose that the microphone and speaker interface has a gasket. However, the examiner maintains that the microphone and speaker interface has a gasket was well known in the art, as taught by Ford.

Ford further teaches that the mouthpiece (46) which reads on the claimed “microphone interface” and earpiece (44) speaker interface including a water-impervious flexible membrane which reads on the claimed “gasket” that allows sound penetration while preventing the entry of water and contaminants (see abstract; col. 4, lines 6-21; col. 4, line 63 col. 5, line 24; Fig. 1), where the portable cordless telephone (12) has a housing (14) that prevents water from entering the housing (14) while allowing the user to speak and hear via the mouthpiece and earpiece during a shower.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Phillips, Nothnagel, Curtis, and Ford to have the microphone and speaker interface has a gasket.

The advantage of combining the teachings of Phillips, Nothnagel, Curtis, and Ford to have a water-resistant handset that can be safely used in watery conditions such as shower, rain, or high humidity conditions while allowing signals and sounds to be transmitted/received by a user's voice (see Ford - col. 4, lines 9-14; col. 5, lines 3-8,19-25; col. 8, lines 11-17).

Regarding **Claim 13**, the combination of Phillips, Nothnagel, Curtis, and Ford discloses everything claimed, as applied above (see claim 12), in addition Phillips further

Art Unit: 2686

teaches of a user interface having a display (32), the display (32) viewable by the mobile communication device user through the housing (see Phillips - Figs. 1-2).

Regarding **Claim 14**, the combination of Phillips, Nothnagel, Curtis, and Ford discloses everything claimed, as applied above (see claim 12), in addition Curtis further teaches wherein the second changeable housing has a different predetermined characteristic than the housing (see Curtis - col. 1, lines 8-17, 48-54; Figs. 1, 3-5).

Regarding **Claim 15**, the combination of Phillips, Nothnagel, Curtis, and Ford discloses everything claimed, as applied above (see claim 12), in addition Curtis further teaches wherein the housing and the second changeable housing can be changeable by the mobile communication device user without the use of a tool (see Curtis - col. 1, lines 8-17, 35-54; Figs. 1, 3-5).

Regarding **Claim 16**, the combination of Phillips, Nothnagel, Curtis, and Ford discloses everything claimed, as applied above (see claim 12), in addition Curtis further teaches of at least one fastener, wherein the fastener or attaching means is adapted to couple the first shell to the second shell (see Curtis - col. 1, line 35 - col. 2, line 17). The fastener or attaching means allows one housing to connect to a second housing.

Regarding **Claim 17**, the combination of Phillips, Nothnagel, Curtis, and Ford discloses everything claimed, as applied above (see claim 12), in addition Curtis further teaches wherein the fastener comprises a latch or latching member (see Curtis - col. 1, line 35 - col. 2, line 17).

Art Unit: 2686

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (US 6,078,792), Nothnagel et al. (hereinafter Nothnagel) (US 4,397,035), Curtis et al. (hereinafter Curtis) (US 6,594,472), and Ford et al. (hereinafter Ford) (US 5,625,688) as applied to claim 17 above, and further in view of Carlson et al. (hereinafter Carlson) (US 5,241,592).

Regarding **Claim 18**, the combination of Phillips, Nothnagel, Curtis, and Ford lacks the rotatable key as stated by the claimed. Carlson further teaches of having a rotatable key (132) for connecting components of a mobile communication device (see col. 2, lines 5-17; col. 6, lines 2-5; Figs. 1, 2, 5c, and 7-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Phillips, Nothnagel, Curtis, Ford, and Carlson wherein the fastener comprises a rotatable key.

The advantage of combining the teachings of Phillips, Nothnagel, Curtis, Ford, and Carlson is to fasten or attach one component with another component of a mobile communication device.

Response to Arguments

4. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.
5. Applicant's arguments filed 23 February 2004 have been fully considered but they are not persuasive.

Examiner respectfully disagrees since reference more than adequately provides support for the claim limitations. Therefore the rejection is maintained.

6. In response to applicant's remark on page 9, 5th paragraph, Phillips shows the housing with a front (top) shell being connected to a back (bottom) (see Figs. 1-2).
7. In response to applicant's comments of Claims 5-11, 20-22 on page 10-11, are rejected for the same reasons set forth for Claims 1 and 19.
8. In response to applicant's comments of Claims 13-18 on page 11, are rejected for the same reasons set forth for Claim 12.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (703) 305-8636. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2686

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJD,JR/wjd,jr
30 April 2004

Marsha D Banks-Harold
MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600